

## RAW SEQUENCE LISTING

DATE: 04/30/2001

PATENT APPLICATION: US/09/668,021

TIME: 14:17:32

Input Set : N:\Crf3\RULE60\09668021.txt

Output Set: N:\CRF3\04302001\I668021.raw

4 <110> APPLICANT: Brunkow, Mary E.  
5 Galas, David J.  
6 Kovacevich, Brian  
7 Mulligan, John T.  
8 Paeper, Bryan W.  
9 Van Ness, Jeffrey  
10 Winkler, David G.  
13 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR INCREASING  
14 BONE MINERALIZATION  
16 <130> FILE REFERENCE: 240083.508  
18 <140> CURRENT APPLICATION NUMBER: 09/668,021  
19 <141> CURRENT FILING DATE: 2000-09-21  
22 <150> PRIOR APPLICATION NUMBER: 09/449,218  
23 <151> PRIOR FILING DATE: 1999-11-24  
25 <160> NUMBER OF SEQ ID NOS: 41  
27 <170> SOFTWARE: FastSEQ for Windows Version 3.0  
29 <210> SEQ ID NO: 1  
30 <211> LENGTH: 2301  
31 <212> TYPE: DNA  
32 <213> ORGANISM: Homo sapien  
34 <400> SEQUENCE: 1

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36	tggeccctgtg	tctcgtctgc	ctgctggtac	acacagcctt	ccgtgtagt	gagggccagg	120
37	ggtggcaggc	gttcaagaat	gatgccacgg	aaatcatccc	cgagctcgga	gagtaccccg	180
38	agcctccacc	ggagctggag	aacaacaaga	ccatgaaccg	ggcggagaac	ggagggcggc	240
39	ctccccacca	cccttttgag	accaaagacg	tgtccgagta	cagctgccgc	gagctgcaat	300
40	tcaccgccta	cgtgaccgat	gggcggtgcc	gcagcgccaa	gccggtcacc	gagctggtgt	360
41	gtcccgccca	gtgcggcccg	gcgcgcctgc	tgcccaaccg	catcgccgcg	ggcaagtggg	420
42	ggcgacctag	tgggcccgac	ttccgctgca	tccccgaccg	ctaccgcgcg	cagcgcgctgc	480
43	agctgctgtg	tcccgggtgt	gaggcgccgc	gcgcgcgcaa	ggtgcgcctg	gtggcctcgt	540
44	gcaagtgcaa	gcgcctcacc	cgcttccaca	accagtcgga	gctcaaggac	ttcgggaccg	600
45	aggccgctcg	gccgcagaag	ggccggaagc	cgccggcccc	cgcccgagac	gccaaagcca	660
46	accaggccga	gtgggagtag	gcctactaga	gcccgcccg	gcccctcccc	accggcgggc	720
47	gccccggccc	tgaaccgcg	ccccacattt	ctgtcctctg	cgcgtgggtt	gattgtttat	780
48	atttcattgt	aaatgcctgc	aaccagggc	agggggctga	gaccttccag	gccctgagga	840
49	atccccggcg	ccggcaaggc	ccccctcagc	ccgccagctg	aggggtccca	cggggcaggg	900
50	gagggaattg	agagtcacag	acactgagcc	acgcagcccc	gcctctgggg	ccgcctacct	960
51	ttgctggtcc	cacttcagag	gaggcagaaa	tggaagcatt	ttcaccgccc	tggggtttta	1020
52	agggagcggg	gtgggagtgg	gaaagtccag	ggactgggta	agaaagttag	ataagattcc	1080
53	cccttgccac	tcgctgcccc	tcagaaagcc	tgaggcgtgc	ccagagcaca	agactggggg	1140
54	caactgtaga	tgtggtttct	agtcctggct	ctgccactaa	cttgctgtgt	aaccttgaac	1200
55	tacacaattc	tccttcggga	cctcaatttc	cactttgtaa	aatgagggtg	gaggtgggaa	1260
56	taggatctcg	aggagactat	tggcatatga	ttccaaggac	tccagtgcct	tttgaatggg	1320
57	cagaggtgag	agagagagag	agaaagagag	agaatgaatg	cagttgcatt	gattcagtgc	1380
58	caaggtcact	tccagaattc	agagttgtga	tgtctctctc	tgacagccaa	agatgaaaaa	1440
59	caaacagaaa	aaaaaaagta	aagagtctat	ttatggctga	catattttac	gctgacaaac	1500
60	tcctggaaga	agctatgctg	cttcccagcc	tggtctcccc	ggatgtttgg	ctacctccac	1560

ENTERED

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61 ccctccatct caaagaaata acatcatcca ttggggtaga aaaggagagg gtccgagggt 1620
62 ggtgggaggg atagaaatca catccgcccc aacttcccaa agagcagcat ccctcccccg 1680
63 acccatagcc atgtttttaa gtcacottcc gaagagaagt gaaaggttca aggacactgg 1740
64 ccttgacggc ccgagggagc agccatcaca aactcacaga ccagcacatc ctttttgaga 1800
65 caccgccttc tgcccaccac tcacggacac atttctgcct agaaaacagc ttottactgc 1860
66 tcttacatgt gatggcatat cttacactaa aagaatatta ttgggggaaa aactacaagt 1920
67 gctgtacata tgctgagaaa ctgcagagca taatagctgc cacccaaaaa tctttttgaa 1980
68 aatcatttcc agacaacctc ttactttctg tgtagttttt aattgtttaa aaaaaaaagt 2040
69 tttaaacaga agcacatgac atatgaaagc ctgcaggact ggtcgttttt ttggcaattc 2100
70 ttocacgtgg gacttgtcca caagaatgaa agtagtggtt tttaaagagt taagttacat 2160
71 atttattttc tcaacttaagt tatttatgca aaagtttttc ttgtagagaa tgacaatgtt 2220
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77 <212> TYPE: PRT
78 <213> ORGANISM: Homo sapien
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84 20 25 30
85 Ala Thr Glu Ile Ile Pro Glu Leu Gly Glu Tyr Pro Glu Pro Pro Pro
86 35 40 45
87 Glu Leu Glu Asn Asn Lys Thr Met Asn Arg Ala Glu Asn Gly Gly Arg
88 50 55 60
89 Pro Pro His His Pro Phe Glu Thr Lys Asp Val Ser Glu Tyr Ser Cys
90 65 70 75 80
91 Arg Glu Leu His Phe Thr Arg Tyr Val Thr Asp Gly Pro Cys Arg Ser
92 85 90 95
93 Ala Lys Pro Val Thr Glu Leu Val Cys Ser Gly Gln Cys Gly Pro Ala
94 100 105 110
95 Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys Trp Trp Arg Pro Ser
96 115 120 125
97 Gly Pro Asp Phe Arg Cys Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val
98 130 135 140
99 Gln Leu Leu Cys Pro Gly Gly Glu Ala Pro Arg Ala Arg Lys Val Arg
100 145 150 155 160
101 Leu Val Ala Ser Cys Lys Cys Lys Arg Leu Thr Arg Phe His Asn Gln
102 165 170 175
103 Ser Glu Leu Lys Asp Phe Gly Thr Glu Ala Ala Arg Pro Gln Lys Gly
104 180 185 190
105 Arg Lys Pro Arg Pro Arg Ala Arg Ser Ala Lys Ala Asn Gln Ala Glu
106 195 200 205
107 Leu Glu Asn Ala Tyr
108 210
110 <210> SEQ ID NO: 3
111 <211> LENGTH: 2301
112 <212> TYPE: DNA

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117 tggccctgtg tctcgtctgc ctgctggtac acacagcctt ccgtgtagtg gagggctagg 120
118 ggtggcaggc gttcaagaat gatgccacgg aaatcatccc cgagctcgga gactacccc 180
119 agcctccacc ggagctggag aacaacaaga ccatgaaccg ggccggagaac ggagggcggc 240
120 ctccccacca cccctttgag accaaagacg tgtccgagta cagctgccgc gagctgcaact 300
121 tcacccgcta cgtgaccgat gggcgtgcc gcagcgccaa gccggtcacc gagctggtgt 360
122 gctccggcca gtgcggcccg gcgcgcctgc tgcaccaacgc catcgcccg gcgaagtgg 420
123 ggcgacctag tgggcccgcac ttccgctgca tccccgaccg ctaccgcgcg cagcgcgtgc 480
124 agctgctgtg tcccgggtgt gaggcgcgcg gcgcgcgcaa ggtgcgcctg gtggcctcgt 540
125 caaagtgcga gcgcctcacc cgcttcacac accagtcgga gctcaaggac ttcgggaccg 600
126 aggcgcctcg gccgcagaag ggccggaagc cgccggcccg cgcgggagc gccaaagcca 660
127 accaggccga gctggagaac gcctactaga gccgcgcgcg gccctcccc accggcgggc 720
128 gccccggccc tgaacccgcg cccacattt ctgtcctctg cgcgtggttt gattgtttat 780
129 atttcattgt aaatgcctgc aaccagggc agggggctga gaccttcag gccctgagga 840
130 atcccggcg ccggcaaggc cccctcagc ccgccagctg aggggtccca cggggcaggg 900
131 gagggaattg agagtccag acactgagcc acgcagcccc gcctctgggg ccgcctacct 960
132 ttgctgttcc cacttcagag gaggcagaaa tgaagcatt ttcacggccc tggggtttta 1020
133 agggagcggg gtgggagtg gaaagtccag ggactggtta agaaagtgg ataagattcc 1080
134 ccttgccacc tcgtgcacca tcagaaagcc tgaggcgtgc ccagagcaca agactggggg 1140
135 caactgtaga agtggtttct agtcctggct ctgccactaa cttgctgtgt aacctgaac 1200
136 tacacaattc tcttcggga cctcaatttc cactttgtaa aatgagggg gaggtgggaa 1260
137 taggatctcg aggagactat tggcatatga ttccaaggac tccagtgcct tttgaatggg 1320
138 cagaggtgag agagagagag agaaagagag agaataatg cagttgcatt gattcagtgc 1380
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146 caccgccttc tgcccaccac tcacggacac atttctgcct agaaaacagc ttcttactgc 1860
147 tcttacatgt gatggcatat cttacactaa aagaatatta ttgggggaaa aactacaagt 1920
148 gctgtacata tgcagagaaa ctgcagagca taatagctgc caccacaaaa tctttttgaa 1980
149 aatcatttcc agacaacctt ttactttctg tgtagttttt aattgttaaa aaaaaaagt 2040
150 tttaaacaga agcacatgac atatgaaagc ctgcaggact ggtcgttttt ttggcaattc 2100
151 ttccacgtgg gacttgtcca caagaatgaa agtagtggtt tttaaagagt taagttacat 2160
152 atttattttc tcacttaagt tatttatgca aaagttttct ttgtagagaa tgacaatggt 2220
153 aatattgctt tatgaattaa cagtctgttc ttccagagtc cagagacatt gttataaaag 2280
154 acaatgaatc atgaccgaaa g 2301
156 <210> SEQ ID NO: 4
157 <211> LENGTH: 23
158 <212> TYPE: PRT
159 <213> ORGANISM: Homo sapien
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164 Ala Phe Arg Val Val Glu Gly

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167 <210> SEQ ID NO: 5
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175 ggtggcaggc gttcaagaat gatgccacgg aaatcatccg cgagctcgga gagtaccccg      180
176 agcctccacc ggagctggag aacaacaaga ccatgaaccg ggcggagaac ggagggcggc      240
177 ctccccacca cccctttgag accaaagacg tgtccgagta cagctgccgc gagctgcact      300
178 tcaccgcgta cgtgaccgat gggccgtgcc gcagcgccaa gccggtcacc gagctggtgt      360
179 gctccgcca gtgcggcccg gcgcgcctgc tgcccaacgc catcgccgc gcgaagtgt      420
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188 gagggaaattg agagtcacag acactgagcc acgcagcccc gcctctgggg ccgcctacct      960
189 ttgctggtcc cacttcagag gaggcagaaa tggaaagcatt ttcaccgccc tggggtttta      1020
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195 cagaggtgag agagagagag agaaagagag agaataatg cagttgcatt gattcagtgc      1380
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197 caaacagaaa aaaaaaagta aagagtctat ttatggctga catatttacg gctgacaaac      1500
198 tcctggaaga agctatgctg cttcccagcc tggcttcccc ggatgttttg ctacctccac      1560
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203 caccgccttc tgccaccac tcacggacac atttctgcct agaaaacagc ttcttactgc      1860
204 tcttacatgt gatggcatat cttacactaa aagaatatta ttgggggaaa aactacaagt      1920
205 gctgtacata tgctgagaaa ctgcagagca taatagctgc cacccaaaaa tctttttgaa      1980
206 aatcatttcc agacaacctc ttactttctg tgtagttttt aattgttaaa aaaaaaaagt      2040
207 tttaaacaga agcacatgac atatgaaagc ctgcaggact ggtcgttttt ttggcaattc      2100
208 ttccacgtgg gacttgtcca caagaatgaa agtagtggtt tttaaagagt taagttacat      2160
209 atttattttc tcacttaagt tatttatgca aaagtttttc tttagagaa tgacaatgtt      2220
210 aatattgctt tatgaattaa cagtctgttc ttccagagtc cagagacatt gttaataaag      2280
211 acaatgaatc atgaccgaaa g                                     2301
213 <210> SEQ ID NO: 6
214 <211> LENGTH: 213
215 <212> TYPE: PRT
216 <213> ORGANISM: Homo sapien

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 222 20 25 30  
 223 Ala Thr Glu Ile Ile Arg Glu Leu Gly Glu Tyr Pro Glu Pro Pro Pro  
 224 35 40 45  
 225 Glu Leu Glu Asn Asn Lys Thr Met Asn Arg Ala Glu Asn Gly Gly Arg  
 226 50 55 60  
 227 Pro Pro His His Pro Phe Glu Thr Lys Asp Val Ser Glu Tyr Ser Cys  
 228 65 70 75 80  
 229 Arg Glu Leu His Phe Thr Arg Tyr Val Thr Asp Gly Pro Cys Arg Ser  
 230 85 90 95  
 231 Ala Lys Pro Val Thr Glu Leu Val Cys Ser Gly Gln Cys Gly Pro Ala  
 232 100 105 110  
 233 Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys Trp Trp Arg Pro Ser  
 234 115 120 125  
 235 Gly Pro Asp Phe Arg Cys Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val  
 236 130 135 140  
 237 Gln Leu Leu Cys Pro Gly Glu Ala Pro Arg Ala Arg Lys Val Arg  
 238 145 150 155 160  
 239 Leu Val Ala Ser Cys Lys Cys Lys Arg Leu Thr Arg Phe His Asn Gln  
 240 165 170 175  
 241 Ser Glu Leu Lys Asp Phe Gly Thr Glu Ala Ala Arg Pro Gln Lys Gly  
 242 180 185 190  
 243 Arg Lys Pro Arg Pro Arg Ala Arg Ser Ala Lys Ala Asn Gln Ala Glu  
 244 195 200 205  
 245 Leu Glu Asn Ala Tyr  
 246 210

248 <210> SEQ ID NO: 7  
 249 <211> LENGTH: 2301  
 250 <212> TYPE: DNA  
 251 <213> ORGANISM: Homo sapien

253 <400> SEQUENCE: 7  
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 256 ggtggcaggc gttcaagaat gatgccacgg aaatcatccg cgagctcgga gactaccccg 180  
 257 agcctccacc ggagctggag aacaacaaga ccatgaaccg ggcggagaac ggagggcggc 240  
 258 ctccccacca cccctttgag accaaagacg tgtccgagta cagctgccgc gagctgcact 300  
 259 tcaccgccta cgtgaccgat gggccgtgcc gcagcgccaa gccggtcacc gagctggtgt 360  
 260 gctccggcca gtgcggcccg gcgcgcctgc tgcccaacgc catcgccgcg ggcaagtggg 420  
 261 ggcgacctag tgggcccgcac ttccgctgca tccccgaccg ctaccgcgcg cagcgcggtg 480  
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 264 aggcgcgtcg gcgcgagaag ggccggaagc cgcggcccg cgcccgagc gccaaagcca 660  
 265 accagggcga gctggagaac gcctactaga gcccgccgc gccctcccc accggcgggc 720  
 266 gccccggccc tgaaccgcgc ccccacattt ctgtcctctg cgcgtgggtt gattgtttat 780  
 267 atttcattgt aaatgcctgc aaccagggc agggggctga gaccttcag gccctgagga 840  
 268 atccccggcg ccggcaaggc cccctcagc ccgccagct aggggtccca cggggcagg 900

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Input Set : N:\Crf3\RULE60\09668021.txt

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L:547 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17

## STATISTICS SUMMARY

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Application Serial Number: US/09/668,021

Alpha or Numeric: Numeric

Application Class:

Application File Date: 09-21-2000

Art Unit:

Software Application: FastSeq

Total Number of Sequences: 41

Total Nucleotides: 57700

Total Amino Acids: 1475

Number of Errors: 0

Number of Warnings: 1

Number of Corrections: 0

## MESSAGE SUMMARY

341 W: 1 ((46) "n" or "Xaa" used)